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47. (NEW) The method defined in claim 16, further comprising the step of determining when service should be performed on the asset based on the amount of usage of the asset.

48. (NEW) The method defined in claim 16, wherein service must be performed on an asset before the amount of usage of the asset is compared to the predetermined standard.

### REMARKS

As a preliminary matter, we thank the Examiner for faxing us a copy of the most recent Office Action. The existence of the Office Action was determined through a routine status check using the office's electronic tracking system.

The Examiner rejected claims 16 and 21-42<sup>1</sup> as being unpatentable pursuant to 35 U.S.C. 103(a). All claims were rejected using U.S. Patent 6,141,629 to Yamamoto et al. ("Yamamoto") by itself or in combination with U.S. Patent 5,953,707 to Huang et al. ("Huang") or U.S. Patent 6,012,045 to Barzilai et al. ("Barzilai"). The Examiner also asserted Official Notice to reject certain claims.

Applicants respectfully traverse each rejection. The disclosure in Yamamoto reveals a system that is extremely narrow in scope and substantially different than the Applicants' invention. A correct reading of Yamamoto renders the Applicants' invention non-obvious given the many material distinctions between Yamamoto and the Applicants' invention. Moreover, a rejection of claims on the basis of section 103(a) requires an affirmative suggestion or motivation to combine or modify referenced teachings. The cited references actually teach away from each other and the Applicants' invention. Moreover, the three references in the aggregate fail to disclose all of the elements disclosed in Applicants' independent claims, and thus the three references cannot constitute grounds for rejecting Applicants' claims. Lastly, the Examiner has incorrectly applied Official Notice to reject Applicants' claims as they relate to automated

<sup>1</sup> Claims 1-15, and 17-20 were previously cancelled by the Applicant without prejudice in an amendment dated April 18, 2001 (Paper No. 10). That same amendment amended claim 16 and added claims 21-42.

invoice generation and warranty enforcement. Pursuant to MPEP § 2144.03, Applicants have already requested that the Examiner provide actual references or a formal affidavit to support the assertions of Official Notice. No such references or affidavits have been subsequently provided by the Examiner. The Examiner's use of Official Notice is especially inappropriate given the supplementary objective evidence of non-obviousness provided in Applicants' Supplemental Response dated June 27, 2001, sent before the legal representatives for Applicants received the present office action. It is also inappropriate given the fact that the cited references teach away from each other.

**I. Rejection of claim 16**

Claim 16 was rejected by the Examiner as being unpatentable over Yamamoto. Huang was combined with Yamamoto to reject the clause in Applicants' claim 16 relating to the generation of a warranty report. Applicants respectfully traverse the rejection.

**A. Yamamoto does not teach any of the four steps described in claim 16**

Yamamoto fails to disclose *any* of the four steps comprising claim 16. Yamamoto does not teach: (a) "generating a maintenance invoice when service is performed"; (b) "transmitting the maintenance invoice to an administrative controller"; (c) "comparing the indication of the amount of usage of the asset with a predetermined standard"; or (d) "generating a warranty report if the amount of usage is less than the predetermined standard." The failure of Yamamoto to teach these steps is particularly evident when the phrase "without human intervention" from the preamble of claim 16 is incorporated into each step.

**1. Generating a maintenance invoice when service is performed**

"Invoice" does not appear in the Yamamoto disclosure as a word or even a concept. Invoices typically communicate both technical and business information. For example, an invoice could describe services performed, parts replaced, and business terms such as a payment amount, a due date, a mailing address and a contact person. Yamamoto is not even cognizant of the information required to generate an invoice.

**2. Transmitting the maintenance invoice to an administrative controller**

As discussed above, Yamamoto is not cognizant of the information needed to generate an “invoice.” Thus, Yamamoto cannot teach or suggest the “transmitting” of a “maintenance invoice.”

**3. Comparing the indication of the amount of usage of the asset with a predetermined standard that is representative of the warranty**

Yamamoto does not disclose the word or the concept of a “warranty.” The concept of “warranty” relates to the responsibility for maintenance work being performed. Yamamoto focuses solely on the issue of when a machine requires maintenance work and ignores entirely the concept of responsibility for the performance of maintenance work. Thus, Yamamoto cannot teach “comparing the indication of the amount of usage of the asset with a predetermined standard that is representative of the warranty” when Yamamoto is not cognizant of the information required to constitute a “warranty.”

**4. Generating a warranty report**

Yamamoto does not disclose the functionality of generating a “report” much less a “warranty report.” Neither the word “report” nor the word “warranty” appear in the Yamamoto disclosure. Yamamoto is limited to determining the next time an asset requires maintenance. Yamamoto is not cognizant of the information required to constitute a “warranty” and thus Yamamoto cannot teach the “generating a warranty report.”

**5. Without human intervention**

As discussed above, Yamamoto does not disclose any of the four steps in claim 16. Further, the phrase “without human intervention” modifies each step in claim 16. Yamamoto does not disclose any awareness related to the automated or manual nature of a process. Words and phrases such as “automated,” “automatic,” “manual,” or “human intervention” do not appear in Yamamoto.

**B. Examiner misapplies Official Notice relating to invoice generation and warranty management**

The Examiner concedes that Yamamoto does not disclose the generation or management of warranty information. Instead, Official Notice was asserted with regards to the generation of an invoice and warranty “upon *purchasing* of an item. (Office Action, Section 4, Page 3).” This assertion is inappropriate for a number of reasons.

First, the Applicants’ invention and claim 16 do not relate to the purchase of an item, or the generation of an invoice or warranty upon the purchase of an item. Rather, the Applicants claim “generating a maintenance invoice *when service is performed on the asset* [emphasis added].” The performing of service on an asset is distinct from purchasing an asset. Similarly, the step of “comparing the indication of the amount of usage of the asset” is triggered by asset usage and not the purchase of an asset. “Comparing asset usage with a predefined standard that is representative of the warranty period” is different than merely displaying a warranty with the purchase of an asset.

Second, the Examiner previously took Official Notice with regards to invoice generation, and the Applicants previously requested (Paper No. 10, Page 8) pursuant to MPEP §2144.03 that an actual reference or formal affidavit be provided that explains the basis of Official Notice and how Official Notice renders claim 16 obvious. As discussed above, examples of invoices or warranties being generated upon the purchase of an asset are inapplicable to claim 16.

**C. The combination of Huang and Yamamoto fails to disclose any of the four steps in claim 16**

**1. Generating a maintenance invoice when service is performed**

The word “invoice” and its equivalents are notably absent from the lengthy 224 column disclosure in Huang. Furthermore, there is no indication that the invention in Huang is aware of the types of business information that are commonly included in an invoice. Contrary to the

Examiner's assertion, Huang cannot be accurately categorized as an "invoice generating method (Office Action, Section 4, Page 4)."

**2. Transmitting the maintenance invoice**

Neither Huang nor Yamamoto teaches the generation of a maintenance invoice, and thus neither can teach the transmitting of a maintenance invoice. The Examiner incorrectly asserts that Yamamoto and Huang are related to "highly coordinated, highly time dependent activities (Office Action, Section 4, Page 3). Neither Huang nor Yamamoto involves the practice of interdependent tasks where the delay of one task will result in all subsequent tasks falling behind schedule. Yamamoto does not incorporate any logic or information beyond an individual machine. Huang is concerned with the overall input or output of an item, and not any particular characteristic of any particular asset.

**3. Comparing the indication of the amount of usage of the asset with a predetermined standard that is representative of the warranty period**

Neither the word nor the concept of "warranty" appear in the Huang. The criteria applied by the invention in Huang is the opposite of the "predetermined standard" in claim 16. Huang applies a "user-defined criteria (Column 36, Lines 61-62)" in contrast to a predetermined standard representative of a warranty period. By definition, a "user-defined criteria" cannot be applied "without human intervention." Moreover, as Huang is not cognizant of a "warranty" there is no suggestion or motivation that a "user-defined criteria" can constitute a period of time such as a "warranty period." Huang does not teach "comparing" data. Rather, Huang teaches the ability to identify a subset of information on the basis of a user-defined criteria. A list of information containing a share characteristic does not constitute a comparison. In contrast, Claim 16 does not relate to the selecting of a subset of warranties, warranty periods, or maintenance work. Instead, claim 16 compares an identified date of service for an asset with a predetermined standard that is representative of the warranty period for that asset.

**4. Generating a warranty report if the amount of usage is less than the predetermined standard**

As discussed above, Huang does not compare asset usage to a “predetermined standard.” Furthermore, Huang does not engage in conditional activities on the basis of a report generated with “user-defined criteria (Column 36, Lines 61-61).” Reports in Huang do not trigger subsequent reports, so there is no suggestion or motivation in Huang for “generating a warranty report if the amount of usage is less than the predetermined standard.”

**D. Huang and Yamamoto teach away from each other, and the Applicants’ invention**

There is no affirmative suggestion or motivation in the art to combine Huang and Yamamoto, and thus the two references cannot be used in combination against the Applicants’ claims. Huang and Yamamoto teach away from each other, and the Applicants’ invention.

Yamamoto is concerned with the on-going internal workings of a piece of equipment without regard to any characteristics outside that particular piece of equipment. In contrast, Huang is concerned with a supply chain of consumable goods, but takes no interest in the characteristics of any particular item. Huang largely ignores the item itself, treats each inventory item as a “black box” with a particular label, and focuses on the quantity of input and output. Huang and Yamamoto have opposing perspectives, processes, and goals.

Yamamoto teaches away from the Applicants’ invention because Yamamoto is not even cognizant of the information needed to generate an “invoice” or to “compare” asset usage to a predetermined standard representative of a “warranty period.” Huang teaches away from the Applicants’ invention because Huang ignores asset maintenance, invoicing, and warranties, and any other information relating to a particular asset and instead seeks to minimize large inventories in an aggregate view of consumable goods by maximizing the throughput of the system. An individual asset is just a number to Huang, while claim 16 relates to invoice generation and warranty comparisons relating to a particular asset. There is no suggestion or

motivation in the art to combine Yamamoto and Haung to obtain the advantages of claim 16 due to the extremely different perspectives of Yamamoto, Huang, and the Applicants' invention. As discussed above, the Examiner's analysis regarding interrelated "construction projects" as "highly time dependent activities" does not support combining Yamamoto and Huang because neither Yamamoto nor Huang teach that the treatment of a particular asset is affected by the treatment of any other asset.

## **II. Rejection of claims 21-24, 27-35, and 38-42**

Claims 21-24, 27-35, and 38-42 were rejected as being unpatentable pursuant to 35 U.S.C. 103(a) over Yamamoto. Yamamoto was combined with Barzilai for the sole purpose of providing warranty information. Applicants respectfully traverse these rejections.

### **A. The art cited by the Examiner does not disclose all of the elements claimed by the Applicants**

Claims 21, 31 and 38 are independent claims. The distinguishing element in claim 21 can be found in its fifth clause:

an analysis controller *located at a second location remote from said local controller* that is responsive to said acquired data from a plurality of local controllers for generating an analysis of said acquired data from said plurality of said local controllers, said analysis controller being configured for automatically determining without human intervention whether maintenance of the asset has been provided.

Claim 31 contains the same distinguishing clause as claim 21, but include, further novel features in its seventh and eighth clauses:

wherein there are a plurality of *responsible parties* associated with said system, a *first responsible party* comprising at least one of a manufacturer and a supplier of an asset and a *second responsible party* comprising at least one of an owner or user of the asset, said analysis controller configured to use at least a portion of said acquired data in *automatically determining which of said responsible parties has responsibility* in whole or in part for maintenance performed on the asset;

said analysis controller including a record of the asset, said record including *said responsible parties and the nature of said responsibility*, the nature of said responsibility including a factor based on said at least one operating characteristic of the asset.

Claim 38 contains the same to additional distinguishing clauses as claim 31, without incorporating the “remote location” limitation of claim 21.

**1. Yamamoto does not disclose “an analysis controller located at a second location remote from said local controller”**

Fig. 12 in the Yamamoto disclosure shows that the input terminal (element 21) is located on the *same* work site (element 30) as the plurality of unnamed dump trucks (elements 10, 11, 12, 13). Thus, Yamamoto does not disclose “an analysis controller located *at a second location remote* from said local controller.” A comparison of Yamamoto’s Fig. 12 and Applicants’ Fig. 3 reveals that the input terminal (Yamamoto’s element 21) in Yamamoto is not “remote” in the sense that the analysis controller (Applicant’s element 51) is “remote” in claim 21. To the contrary, the input terminal (element 21 in Fig. 12) of Yamamoto is no more “remote” than the Applicants’ *local* controller (element 36 in Fig. 3) in claim 21. Yamamoto’s managing computer (element 51) is at a “remote” location. However, the managing computer simply provides a way to distribute the locally generated information to remote users (Column 9, Lines 24-27). Yamamoto’s “remote” managing computer does not perform “analysis” of any type. This distinction applies to both claims 21 and 31, in addition to each of their dependent claims.

Contrary to the Examiner’s assertion, the input terminal (element 21 in Fig. 12) cannot constitute a “analysis controller” of claim 21. The acceptance of such an assertion yields a result inconsistent with the very terms of claim 21. For Element 21 in Fig. 12 to constitute an “analysis controller,” the unmanned dump trucks at 10, 11, 12, and 13 would need to constitute “local controllers” because claim 21 provides that “an analysis controller . . . is responsive to said acquired data from a plurality of local controllers for generating an analysis of said acquired data from said plurality of said local controllers.” However, the dump trucks at 10, 11, 12, and 13 cannot constitute “local controllers” because each “local controller” is associated with a “receiver” that receives “acquired data” sent by a “transmitter” after being captured by a “data acquisition device.” For the Examiner’s assertion to be correct, the unmanned dump trucks at



10, 11, 12, and 13 would need to include a data acquisition device, a transmitter for intra-truck communication, a receiver to receive an intra-truck communication, and a local controller located on the truck to forward the intra-truck communication to the analysis controller. Yamamoto does not disclose that each truck contain a transmitter, a receiver, and a local controller for transmitting acquired data relating to a truck to a receiver on that same truck. Thus, the computer at 21 in Fig. 12 of the Yamamoto disclosure is not an “analysis controller located at a second location remote from said local controller.”

**2. Yamamoto cannot incorporate “responsible parties” functionality**

Yamamoto fails to incorporate the concept of different entities or parties, much less “responsible parties.” Yamamoto cannot analyze information relating to an owner, a user, a supplier, a service provider, a manufacturer, or any other type of party. One of the useful features of claims 27, 31, 38, and their dependent claims, is the ability to determine which entity is “responsible” for maintenance activities performed on an asset. The “responsible party” elements clearly distinguish Applicants’ claims from the cited references. The Office Action neglects to address this limitation.

**3. Barzilai cannot incorporate “responsible parties” functionality**

Barzilai discloses a computer-based bid, auction, and sale system. Barzilai also discloses the ability of a seller to provide an Internet site for providing warranty information relating to the consumer product being purchased *at the time that a buyer makes a bid to purchase the asset*. Barzilai does not disclose any awareness of an asset after it has been sold, and thus Barzilai cannot determine the “responsible party” with regards to maintenance work performed on an asset. Barzilai merely lists the warranty information, but Barzilai does not attempt to teach the determination of a “responsible party” at the time that maintenance work is performed. Thus, Barzilai does not possess the type of information needed for “automatically determining which of said responsible parties has responsibility in whole or in part for maintenance performed on the asset.”

**4. The dependent claims contain limitations not disclosed by either Yamamoto or Barzilai**

Claims 27, 28, and 29 include the “responsible parties” limitation contained in claims 31 and 38 as discussed above. Claims 32 and 39 include additional limitations relating a “warranty” to the “nature of said responsibility.” Claims 33 and 40 include a limitation of using “asset usage” to determine which party is the “responsible party.” Claims 34 and 40 include a limitation of using “date of service” to determine which party is the “responsible party.” Neither Yamamoto nor Barzilai disclose differentiating responsibilities based on the nature of a warranty, an operating characteristic of an asset, or a relationship with a party or entity. Barzilai’s teaching is limited to disclosing warranty information before the sale of an asset.

Claims 22, 23, 24, 35, 41, and 42 depend from independent claims that are distinguishable from the prior art and in condition for allowance, so claims 22, 23, 24, 35, 41, and 42 are similarly ready for allowance.

**B. Yamamoto and Barzilai teach away from, the application and enforcement of warranty coverage in the context of maintenance work**

Neither Yamamoto nor Barzilai contain a suggestion or motivation for combination with each other as is required for a 103(a) rejection. Yamamoto and Barzilai teach away from each other, and the Applicants’ invention. Yamamoto takes a detailed and on-going technical view of an asset. In contrast, Barzilai treats each asset like a “black box” with a list of attributes required to sell the “black box,” without any awareness of the ongoing use of the asset. Yamamoto ignores the existence of different entities and parties. Barzilai is focused on selling consumer goods to potential bidders. Barzilai and Yamamoto teach away from each other.

The Applicants’ invention is at odds with the underlying goals and methodology of both Yamamoto and Barzilai. Unlike Yamamoto, the Applicants’ invention is cognizant of outside entities and business information necessary for invoices and warranties. Unlike Barzilai, the Applicants’ invention is concerned with the use of an asset, and not merely its sale. The long term use of an asset and the long term relationships that accompany such use are totally foreign

and the antithesis of Barzilai. Barzilai cannot be said to include a motivation or suggestion to combine with art comprising the exact opposite goals. Notably, the word “maintenance” does not even appear once in the Barzilai disclosure. Barzilai teaches away from Yamamoto and the Applicants’ claims.

### **III. Rejection of claims 25, 26, 36, and 37**

The Examiner incorrectly asserted that Yamamoto, Barzilai, and Huang render claims 23, 26, 36, and 37 obvious.

#### **A. Yamamoto, Barzilai, and Huang fail to teach all of the elements taught by the Applicants’ claim 21 and claim 31**

Claims 25 and 26 depend on claim 21. Claims 36 and 37 depend on claim 31. As discussed in greater detail above, both claims 21 and 31 are in condition for allowance. As discussed above, neither Yamamoto nor Barzilai disclose an analysis controller at a “remote” location or the ability to determine a “responsible party” at the point in time in which maintenance work is performed. Even though there is no suggestion or motivation in the art to combine Yamamoto, Barzilai, and Huang, such a combination still fails to disclose a “remote” location for an analysis controller or the ability of a system to determine a “responsible party” at the point in time in which maintenance work is performed.

#### **B. Applicants’ dependent claims include additional distinctions**

Claims 25 and 36 both contain the additional “procurement and utilization” reports limitation. None of the cited references contain such a combination. Yamamoto ignores inter-party relationships and the history of how an asset came into the possession of the owner. Barzilai is concerned solely with selling assets, and does not include the feature of analyzing any type of procurement data, much less utilization data. Huang is only concerned with inputs and outputs as black boxes, while ignoring utilization and procurement data.

Claim 26 depends on claim 25 and claim 37 depends on claim 36. Claims 26 and 37 share an extra limitation, that of posting reports to a website maintained on the Internet. While Barzilai may post warranty information on the Internet at the time of bidding, the aggregation of

the three cited references fails to disclose the posting of “management reports” relating to “procurement and utilization of an asset” on the Internet. Barzilai has no cognizance of asset usage. As requested by the Applicants in Paper No. 10, MPEP § 2144.03 requires that the examiner provide actual references or a formal affidavit to support the assertion that posting a management report on the Internet is known in the art. No such references or affidavits have been subsequently provided by the Examiner.

**C. Yamamoto, Barzilai, and Huang fail to teach all of the elements that the Examiner asserts they teach**

Contrary to the Examiner’s assertions, Yamamoto does not disclose the ability to “manage and control maintenance information” as the phrase “manage and control maintenance information” relates to the Applicants’ invention. As discussed above, the information managed by the Applicants’ invention is broader in scope than relating to the solely internal technical data used by Yamamoto for the sole purpose of determining maintenance due times. Yamamoto also fails to disclose an awareness of “responsible” parties, or that assets under Yamamoto are part of a “construction process” or any type of master schedule of interrelated events as asserted by the Examiner. Yamamoto is exclusively concerned with information on a machine by machine basis, and makes no attempt to interrelate or aggregate such analysis.

Barzilai and Huang are also misconstrued by the Examiner as described in greater detail above. Barzilai discloses a list of warranty information disclosed at the point of sale of an asset, but Barzilai does not teach the ability to determine “responsibility” for maintenance work, or any aspect of an ongoing use of an asset. Similarly, Huang may disclose criteria-based report generation, but Huang does not teach the determination of which entities are “responsible parties” for the purposes of maintenance work performed on an asset. The criteria-based reports in Huang are limited to selecting a list or subset of information records on the basis of a particular criteria. Huang does not perform any comparison between the “warranty associated with an asset” in the context of the facts surrounding the use of the asset, to determine which party is responsible for providing maintenance services.

**D. Yamamoto, Barzilai, and Huang teach away from Applicants' invention**

There is no affirmative suggestion in the art to combine the references of Yamamoto, Barzilai, and Huang. The assertion that the running behind of a single task in a construction project may result in similar delays for all subsequent tasks does not support the combination of Yamamoto, Barzilai, and Huang as asserted by the Examiner. None of the references cited by the examiner suggested such an interrelated process. Yamamoto, Barzilai, and Huang teach away from each other, as well as teach away from the Applicants' invention.

Yamamoto's focus on "in-house" maintenance, and Yamamoto's lack of awareness regarding financial characteristics, entities, procurement information, and business processes renders a combination with Barzilai and Huang non-obvious because Barzilai and Huang are not technical systems or methods focusing on the on-going technical characteristics of a single asset. Yamamoto's focus and perspective are substantially different than both Barzilai and Huang. Moreover, Barzilai and Huang process business information that is not related to the ongoing use of an asset, and thus Barzilai and Huang teach away from the Applicants' invention with relates to ongoing use of assets and ongoing relationships with different entities regarding those assets.

Barzilai discloses an electronic bid and auction system. Barzilai does not disclose ongoing relationships between different entities. Barzilai does not disclose the enforcement of a warranty in the context of maintenance work being performed. In many ways, Barzilai takes the opposite approach of Yamamoto, and thus a Barzilai-Yamamoto combination is not appropriate. Barzilai is only concerned with business terms at the point of sale, no information related in any way to an ongoing relationship.

Huang is an inventory management system that also teaches away from Yamamoto for reasons similar to why Barzilai teaches away from Yamamoto. Huang is an internal inventory Huang looks at assets only in the aggregate and as disposable commodities. Yamamoto looks to the continuous use of an asset.

The differing underlying philosophies and approaches of Yamamoto, Barzilai, and Huang are discussed in greater detail above, as is the lack of a suggestion or motivation in the prior art to combine such references.

#### **IV. NEW CLAIMS**

Although claim 16 is independently allowable, several dependent claims have been added which further distinguish the Applicants' invention from the prior art. Terms such as "invoice" and "warranty" intrinsically tend to relate to multi-person or multi-entity relationships. Entities or persons will generally not send an invoice or execute a warranty to themselves. New claims 43-46 add multi-entity awareness as express claim limitations. Yamamoto, the primary reference cited against the Applicants, does not incorporate or even acknowledge situations involving multiple entities. Yamamoto is limited to situations where maintenance work is provided "in-house" without regards to warranties, service agreements, or other business terms that arise whenever two or more entities are in a relationship with each other. (Abstract; Column 1, Line 30, Line 46; Column 2, Line 5, Lines 44-45; Column 8, Line 66).

Claim 47 adds the step of determining when service should be performed on the asset based on the amount of usage of the asset. Yamamoto uses different criteria for such a determination. Claim 48 adds the limitation that a the comparison between asset usage and the predefined warranty information is triggered not by the purchase of an asset, but by the performance of maintenance services on the item.

#### **CONCLUSION**

Claims 16, 21-42 are not rendered obvious by the disclosures contained in Yamamoto, Barzilai, and Huang. In view of the analysis above, the pending claims are in condition for allowance. If the Examiner has any questions or issues relating to Applicants' response, he is earnestly encouraged to telephone the undersigned representative.

It is believed that any additional fees due with respect to this paper have already been

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identified in any transmittal accompanying this paper. However, if any additional fees are required in connection with the filing of this paper that are not identified in any accompanying transmittal, permission is given to charge account number 18-0013 in the name of Rader, Fishman and Grauer PLLC.

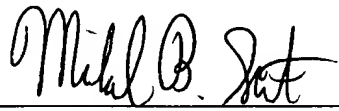
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